SR 520 Pontoon Construction
Design-Build Project

Environmental Compliance Plan
Volume II

Appendix K
Stormwater Pollution Prevention Plan for MOTHBALL Phase Under NPDES Sand and Gravel General Permit

Prepared By:

Kiewit-General, A Joint Venture

Prepared For:

Washington State Department of Transportation

July 1, 2015

Revision 7
Released for Construction

SWPPP Certification Form

The Permittee shall use this form to sign and certify that the Stormwater Pollution Prevention Plan (SWPPP) is complete, accurate and in compliance with the Sand and Gravel General Permit.

- A SWPPP certification form needs to be completed and attached to all SWPPPs.
- Each time a Level 1, 2, or 3 Corrective Action is required, this form needs to be re-signed and re-certified by the Permittee, and attached to the SWPPP.

Is this SWPPP certification in response to a Level 1, 2 or 3 Corrective Action? ☐Yes ☒No

If Yes:

- Type of Corrective Action? ☐Level 1 ☐Level 2 ☐Level 3
- Date of SWPPP update/revision: _____

"I certify under penalty of law that this SWPPP and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate information to determine compliance with the Industrial Stormwater General Permit. Based on my inquiry of the person or persons who are responsible for stormwater management at my facility, this SWPPP is, to the best of my knowledge and belief, true, accurate, and complete, and in full compliance with Permit Conditions S3 and S8, including the correct Best Management Practices from the applicable Stormwater Management Manual. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Operator's Printed Name*	Title
Operator's Signature*	Date

*Federal regulations require this document to be signed as follows:
For a corporation, by a principal executive officer of at least the level of vice president.
For a partnership or sole proprietorship, by a general partner or the proprietor, respectively.
For a municipality, state, federal, or other public facility, by either a principal executive officer or ranking elected official.

This document shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

1. The authorization is made in writing by a person described above and submitted to the Washington State Department of Ecology (Ecology).
2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters.

Changes to authorization. If an authorization under number 2 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of number 2 above shall be submitted to Ecology prior to, or together with, any reports, information, or applications to be signed by an authorized representative.

Table of Contents

Figures

Attachments

Abbreviations/Acronyms

Abbreviation/ Acronym	Definition
BMP	Best management practice
CESF	Chitosan-enhanced sand filtration
DMR	Discharge Monitoring Report
Ecology	Washington State Department of Ecology
ESC	Erosion and Sediment Control
ESCP	Erosion and Sediment Control Plan
HCl	Hydrochloric Acid
SGGP	Sand and Gravel General Permit
SWPPP	Stormwater Pollution Prevention Plan

Section 1. Facility Description and Contact Information

1.1 Facility Information

Name of Facility: SR 520 Pontoon Construction

Street: 1301 West Heron Street

City: Aberdeen State: Washington ZIP Code: 98520

County: Grays Harbor Permit Number: WAR501544

Latitude: 46 º 57 ' 58.31" N Longitude: 123 º 49 ' 52.21" W

Estimated area of industrial activity at site exposed to stormwater: 55 (acres)

Discharge Information

Does this facility discharge stormwater into surface waters?	☒ Yes	☐ No
Does this facility discharge stormwater into a municipal storm water conveyance system?	☐ Yes	☒ No

SIC Code(s): 3272 and 3273

1.2 Contact Information/Responsible Parties

Facility Operator:

Name: Joaquin Medina, Project Manager, Kiewit-General

Address: 1301 West Heron Street

City, State, Zip Code: Aberdeen, Washington 98520

Telephone Number: 360-500-4398 Cell Phone Number: 360-204-2091

Email address: Joaquin.Medina@kiewit.com

Fax number: 360-648-7162

Facility Owner:

Name: WSDOT

Address: P.O. Box 1928

City, State, Zip Code: Aberdeen, WA 98520

SWPPP Contact:

Name: Evan Callahan, Kiewit-General

Position: Environmental Coordinator

Telephone number: 360-500-4406 Cell Phone Number: 360-739-9098

Email address: Evan.Callahan@kiewit.com

Fax number: 360-648-7162

1.3 General Location and Site Maps

Site vicinity map is provided as Attachment A. All relevant site layout drawings are provided in Attachment B.

1.4 Purpose

This Storm Water Pollution Prevention Plan (SWPPP) was developed as required by Permit Condition S5.C of the NPDES Sand and Gravel General Permit (SGGP) #WAG501544 issued by the Department of Ecology to Kiewit-General. This plan identifies best management practices and procedures to ensure compliance with the SGGP requirements.

It is important to note that this is not a "stand-alone" plan, and that the site's environmental management personnel must reference several other interrelated environmental plans in order to successfully implement all required compliance efforts. While this plan is provided as an appendix to this site's Environmental Compliance Plan (ECP), it is also identified as one of four distinct plans that comprise the "Site Management Plan", as defined by the SGGP condition S.5. Per this permit condition, the Site Management Plan (SMP) must include the following plans:

- Erosion And Sediment Control Plan
- Water Quality Monitoring Plan
- Stormwater Pollution Prevention Plan
- Spill Control Plan

All of the above listed plans are included as appendices to this site's Environmental Compliance Plan (ECP).

1.5 Stormwater Pollution Prevention Team

The personnel responsible for managing and implementing this SWPPP are identified in the site's Environmental Compliance Plan.

Section 2. Facility Assessment

2.1 Facility Description for "Mothball" Phase

Industrial Activity: For the SR 520 Pontoon Construction Design-Build Project (Project) the Washington State Department of Transportation (WSDOT) contracted with Kiewit-General to construct a pontoon casting facility and pontoons in the Grays Harbor region of Washington State. The project area encompasses the Aberdeen Log Yard site and the City of Aberdeen roadways in the vicinity of the Aberdeen Log Yard. The purpose of the Project was to construct longitudinal, cross, and supplemental stability pontoons that can be put into operation should the existing SR 520 Bridge need emergency replacement. Construction of these pontoons was completed in March 2015, after which Kiewit-General began demobilizing equipment, materials, and temporary installations off the site.

Up to six pontoons were constructed in the dry in the casting basin at a time. The pontoons were constructed of concrete and reinforced steel. Because a concrete batch plant was onsite to produce the large quantity of concrete needed for pontoon fabrication, this Project obtained a National Pollutant Discharge Elimination System (NPDES) Sand and Gravel General Permit.

Regular Business Hours: Pontoon fabrication operations took place in two shifts, from 7AM to 3:30PM and 3:30PM to 11:00PM, Monday–Saturday.

General Layout: During Operations Phase, the facility included a casting basin, a concrete batch plant, construction office trailers, laydown areas, water treatment areas, a saw shop, a parking lot, and roads. However, for the "Mothball" Phase, the concrete batch plant was removed, as well as the office trailers and saw shop. As of July 31st 2015, Construction equipment and materials are not longer being stored on site. Refer to the site maps provided in Attachment B.

2.2 Industrial Activity, Materials Inventory, and Associated Pollutants

The pontoon fabrication work phase broadly included the following major elements:

- Pontoon Fabrication
- Pontoon Float-out
- Temporary Moorage

The pontoons were constructed out of concrete and reinforced steel.

Industrial activity to support pontoon fabrication included use of heavy construction equipment and a concrete batch plant. Maintenance and fueling occurred onsite and in compliance with the best management practices (BMPs) described in the Spill Prevention Control and Countermeasures Plan (SPCCP; Appendix C of the Environmental Compliance Plan).

The casting basin was thoroughly washed and swept clean before the first set of pontoons was fabricated and after each set of pontoons was ready for launching, to prevent residual construction-related material from entering the waters of Grays Harbor when the casting basin was flooded for pontoon float-out. The fabricated pontoons were also pressure washed within the basin before transport. The wash water was captured in the basin and pumped to the process water pond for treatment before discharge to perimeter surface water ditches, and/or Grays Harbor per the National Pollutant Discharge Elimination System (NPDES) Sand and Gravel General Permit conditions. All removed debris and construction materials was properly disposed of in a permitted upland disposal facility. The procedures and BMPs implemented during casting basin flooding/inundation and pontoon float-out are described in detail in the Casting Basin Operations Manual.

After pontoon cleaning and a walkthrough to verify that the casting basin no longer contained any construction-related debris, the casting basin was flooded. Once the level of water inside the casting basin reached sea level outside the casting basin, the gate was removed. Tug boats floated-out each pontoon from the casting basin in sequence, and delivered them to a temporary moorage location. The potential for spills during casting basin filling, float-out, and temporary moorage was small; nevertheless, all reasonable means were used to minimize the chance of spills.

2.3 General Water Management Approach

All storm water and process water discharged from the site during pontoon fabrication operations was required to meet the NPDES Sand and Gravel General Permit conditions for pH, turbidity, total suspended solids, and oil sheen.

As a contingency measure, Kiewit-General acquired a State Waste Discharge Permit for discharge of process water to the City of Aberdeen Wastewater Treatment Plant (WWTP), if the process water is within acceptable limits for the treatment plant. The alternative discharge to the WWTP was rarely used, . Kiewit-General obtained a permit termination acknowledgement letter from Ecology for this State Waste Discharge Permit on June 29, 2015, which confirmed that the permit would be terminated in 30 days, on July 29th, 2015.

2.3.1 Storm Water Management

Kiewit-General treated storm water from all working and pollution-generating impervious surfaces throughout the project site. The site has been graded to drain impervious working surface areas into wet ponds and/or biofiltration swales for basic water quality treatment. Conveyance systems composed of inlets, pipes, ditches, and pipe outfalls have been constructed to discharge treated runoff. Outfalls to the perimeter ditches, launch channel, and Grays Harbor have been equipped with tide-flex valves or flap gates and outfall rock protection. The Project was exempt from the Washington State Department of Ecology's (Ecology's) Flow Control Regulations.

The parking area (Attachment B—Water Management Plan, Item 18) is located along the east side of the site. Biofiltration swales (Attachment B—Water Management Plan, Item 20) provide basic water quality treatment for the employee parking area and office area. The biofiltration swales have been distributed throughout the parking lot and are designed as continuous inflow biofiltration swales, allowing surface runoff to flow unconcentrated into the biofiltration swales for treatment. Four of the parking lot biofiltration swales drain to inlets and a conveyance system that discharges to a launch channel outfall. One biofiltration swale darins from the north end of the parking lot into the eastern ditch through an inlet and conveyance system, which is discharged to the existing outfall to the east perimeter ditch. An additional biofiltration swale provides basic water quality for the entrance driveway and the shipping and receiving areas located north of the parking lot, and discharges to the jurisdictional ditch north of the project.

Three wet ponds are maintained for storm water treatment. As a final step during construction, the sediment traps were re-excavated and permanent wet ponds have been constructed. Two wet ponds are located on either side of the launch channel (Attachment B—Water Management Plan, Items 1 and 2). A third wet pond is located adjacent to the process water treatment pond at the north apex of the property (Attachment B—Water Management Plan, Item 3). The three wet ponds provide basic water quality treatment for general use areas and roadways throughout the site. The pipe outfalls and emergency overflow channels for the two southern ponds are located within the rock revetment of the launch channel. Both closed and open conveyance systems are located throughout the property to carry runoff to and from treatment facilities and to outfalls. Permanent erosion control measures (e.g., splash pads at the outfalls) have been provided at all concentrated points of discharge to ditches and surface waters.

The stockpile located in the multi-use area in the southwest corner of the site has been stabilized in accordance with WSDOT-approved BMPs identified in the Highway Runoff

Manual (HRM) and the Erosion and Sediment Control Plans. The stockpile will remain on the site indefinitely. The stockpile stabilization measures included creating self-sustaining plant communities that require no fertilizer and little to no weed control once they are established. After the plant establishment period, the stockpile area will not be subject to intensive landscape maintenance practices and will not be considered a pollution-generating pervious surface. A portion of the runoff from the stockpile drains into the water quality wet pond (which is sized to accommodate the additional runoff). The remaining stockpile runoff drains into swales for conveyance to the existing ditch outfall into the west ditch. These swales are sized for conveyance only.

2.3.2 Process Water Management

Prior to pontoon fabrication, most of the north pond was converted into a lined process water treatment pond (Attachment B—Water Management Plan, Item 21). This process water pond operates during pontoon fabrication and casting basin operations. This pond treats process water and Type 3 storm water generated on the floor of the casting basin and the concrete casting slabs once the pontoons and components are in production. Water released from this pond will meet the water quality requirements of the NPDES Sand and Gravel General Permit and/or the State Waste Discharge Permit (acquired for contingency discharge to the WWTP). The process water treatment pond includes: (1) a primary system that discharges properly treated water to a pipe outfall into the west perimeter ditch, and (2) a system to discharge acceptable water to the City of Aberdeen WWTP for treatment on an intermittent basis as a contingency, provided the site operator obtains a State Waste Discharge Permit for this discharge.

During Operations Phase, process water from Pond 1 was typically treated for high pH with an automated pH neutralization system, utilizing a 50% solution of sulfuric acid. The acid was injected into the flow stream as the water was pumped out of cell 4 of Pond 1. However, during the “Mothball” Phase, it is not anticipated that pH treatment will be required, and the water that collects in Pond 1 may be gravity discharged to the West Channel via a pipe outfall.

The onsite concrete batch plant recycled its own process water and had its own process water treatment methods. The batch plant discharged treated process water to the west ditch outfall.

Process water pumps were used to pump process water from the casting basin and pre-cast facilities to the process water treatment pond during pontoon fabrication. Process water flowed into sumps and piping on the east and west edges of the casting basin slab. The process water system was designed to pump the combined flows of process water and storm water out of the casting basin to the process water pond. The pump

system was sized to keep the floor of the casting basin sufficiently free of standing water to allow for pontoon fabrication. During the Mothball Phase, this pump system will continue to work automatically to pump and rainwater collected in the basin and casting beds up to Pond 1.

After pontoons were constructed and readied for float-out, the basin was swept and washed down. All wash-down water was pumped out of the casting basin through the process water system to the process water treatment pond. Following completion of the cleaning process, ground water and process water pumps were shut off. The casting basin was flooded, the gate removed, and the pontoons were floated out into the channel of Grays Harbor. After float-out, the gate was reinstalled and the basin was drained by pumping water from the casting basin back into the harbor through fish screens. During basin drainage, fish were safely collected, removed, and placed back into the harbor. The process water pumps and ground water pumps were then reactivated for additional pontoon fabrication and dewatering activities.

Reference Appendix G for additional information on Revisions:

- Revision June 13, 2013: Phone conversation with Chris Johnson/Ecology and with John Pearch/Ecology (Wells), they confirmed it was OK to send the groundwater from the popped Pressure Relief Valve in the casting basin up to Pond 1 with process water.
- Revision July 17, 2013: Per phone conversation with Chris Johnson/Ecology, POC-8 is Process Water being discharged to surface water, and TSS monitoring is required (WQ Plan originally identified this as Stormwater) (Letter to Ecology 7/19/2013).
- Revision July 17, 2013: Per phone conversation with Chris Johnson/Ecology, since we did not construct outfall POC-9, we do not have to report it each quarter at all (we had been reporting "no discharge" before) (Letter to Ecology 7/19/2013).
- Revision December 20, 2013: Added note regarding process water from QA/QC concrete testing shack being pumped directly to the CalPortland batch plant slurry pit for treatment. However, this was a temporary system that has been de-activated/plugged for the “Mothball” Phase.

2.3.3 Casting Basin Dewatering and Management of Dewatering Water

During operation of the casting basin, ground water is collected from underdrains below the casting basin slab and side slopes. The ground water collected from the dewatering system is pumped to the presettling pond (Pond 4), from which it is re-infiltrated into the ground using an infiltration bed parallel to the east side of the property. This re-infiltration of ground water is critical to maintain the ground water elevation at the

perimeter of the property, and to minimize the potential for settlement and impact to adjacent, off-property structures. Ground water discharged to the infiltration bed will meet NPDES Sand and Gravel General Permit requirements for oil sheen. In addition to infiltration via the infiltration bed, any remaining dewatering ground water is discharged into the east perimeter ditch, which ultimately discharges to Grays Harbor from the southeast corner of the site property.

Revision July 9, 2013: Confirmed with Ecology and the City of Aberdeen WWTP our proposed procedure for chlorinating standing water in the casting basin to control algae, and send the chlorinated water to the WWTP for de-chlorination and final discharge (Appendix G). However, this procedure was never implemented. Instead, Kiewit-General swept-up and dried any algae growing on the basin floor, and disposed appropriately at an upland facility.

2.4 Spills and Leaks

Due to historic uses of the site as a lumber mill and log storage yard, soils with elevated concentrations of total petroleum hydrocarbons (TPH) and/or creosote material may be present at isolated locations. The results from a Phase II Environmental Site Assessment and Groundwater Investigation completed within the Impact Area Line at the site were included in Appendix E13 of WSDOT's Request for Proposal (RFP) and identified the potential contamination.

- To date, no underground storage tanks (USTs) have been identified at the site and no USTs containing petroleum hydrocarbons were encountered during construction. If an unknown UST at the site is encountered, it shall be decommissioned and removed pursuant to all applicable rules and regulations.

Potential Pollutant Sources during Mothball Phase

Industrial Activity / Exposed Materials	**Associated Pollutants**
Pontoon fabrication—outdoor manufacturing. NO LONGER OCCURRING	None during Mothball Phase
Process water treatment ponds- pH TREATMENT SYSTEM NO LONGER ON SITE	None during Mothball Phase
Onsite fuel storage and refueling truck operations – NO LONGER OCCURING	None during Mothball Phase
Operation of construction equipment – NO	None during Mothball Phase

EQUIPMENT ONSITE	
Concrete batch plant- NO LONGER ON SITE	None during Mothball Phase
Lube farm and vehicle/equipment maintenance facility – NO LONGER ON SITE	None during Mothball Phase
Driving and parking on gravel surfacing across site – This activity may occur weekly or monthly as the site management team monitors the site during Mothball Phase.	Turbidity, dust/particulate, diesel, gasoline, oil, grease, and sheen.
Loading/unloading bulk materials, ready-mix cement, fuels and vehicle/equipment maintenance fluids - – NO LONGER OCCURING	None during Mothball Phase

Areas of Site Where Potential Spills/Leaks Could Occur

Location	**Outfalls**
Parking Lot	POC-4 to East Dicth, and POC-7 to Grays Harbor
Casting basin	Launch channel, Grays Harbor / Chehalis River
Process water treatment ponds	East or West Ditch

Section 3. Best Management Practices

The BMPs are described in more detail in other plans that are more specific to the planned project operations. The BMPs for spills are covered by the SPCCP (Appendix C of the ECP) and the Erosion and Sediment Control Plan (ESCP) details the erosion and sediment management BMPs (Appendix B.2 of the ECP). The following sections describe other potential BMPs in more general terms.

3.1 Runoff Conveyance and Treatment Best Management Practices

The following runoff conveyance and treatment BMPs are expected to control pollutants and comply with the stormwater discharge limits of the NPDES Sand and Gravel General Permit.

Potential or planned runoff conveyance BMPs include the following:

- Though not expected to be needed during Mothball Phase, interceptor dikes and berms may be used to control the stormwater flow and direct the flow to the appropriate treatment systems

- Biofiltration swales
- Lined conveyance channels and ponds
- Pipe slope drains
- Outlet protection, when necessary

Potential treatment BMPs include the following:

- Biofiltration swales
- Infiltration or detention basins
- Sediment traps

3.2 Innovative Best Management Practices

Innovative treatment, source control, reduction or recycling, and operational management practices beyond those identified in Ecology's *Stormwater Management Manual for Western Washington* (Ecology 2005) are encouraged if they help achieve compliance with the NPDES Sand and Gravel General Permit. As an Innovative treatment method, a sulfuric acid treatment system and hydrochloric acid treatment system was used for high pH process water. During Mothball Phase, treatment for high pH water is not anticipated.

3.3. Other Materials

While hazardous materials are not expected to be stored on site during the Mothball Phase, appropriate BMPs will be implemented to ensure that hazardous materials are not introduced to stormwater. These measures are detailed in the SPCCP. These materials include the following:

- Toxic materials or chemicals—refer to the SPCCP.
- Petroleum-contaminated soils that fail to meet MTCA Method A treatment levels—managing contaminated soils is detailed in the *Soil Management Plan* (Appendix I of the ECP).
- Cement—managing concrete and concrete-contaminated process water is detailed in the Collection Containment and Disposal Plan (Appendix D of the ECP).
- Admixtures—refer to the SPCCP.
- Fuels, lubricants, and other petroleum products—refer to the SPCCP and attachments detailing fueling procedures.

- Any material that contains petroleum contamination or has the potential to cause aquatic toxicity.

3.4. Source Control Best Management Practices

The following source control BMPs are required to achieve All Known, Available, and Reasonable Treatments (AKART) and compliance with the stormwater discharge limits in the NPDES Sand and Gravel General Permit. These BMPs are also detailed in the SPCCP and ESCP.

- No storage of chemicals or products is expected to occur onsite. However, as a BMP, store all chemical liquids, fluids, and petroleum products, on an impervious surface surrounded with a containment berm or dike that is capable of containing 10 percent of the total enclosed tank volume or 110 percent of the volume contained in the largest tank, whichever is greater.
- Precipitation must be prevented from accumulating in containment areas with a roof or equivalent structure.
- If cover is not practicable, the SPCCP must include a description for managing and disposing of accumulated water.
- Empty containers must be fully drained, capped, and labeled. The number of empty containers onsite must be minimized.
- Drip pans and absorbents will be used under leaky vehicles and equipment as a temporary measure until the vehicle or equipment is taken off site.
-
- Leaking equipment will be taken out of service until repaired to prevent further leaks to the ground. All leaks will be repaired before equipment is put back into service on the site.
- Sediment track-out to paved public roads will be managed to prevent the tracked sediment from reaching surface water or storm drain systems. Discharges to surface waters, public storm drain systems, or both are subject to permit limits for turbidity and must be included in the Permittee's sampling plan whenever track-out onto the public roadway is evident. Measures recommended to control or prevent track-out include the following:
  - Limit vehicle access and exit to one route, if possible.
  - Stabilize access points with a pad of quarry spalls, crushed rock, or other equivalent BMP, as necessary to minimize the tracking of sediment onto public roads.

- Clean public roads thoroughly at the end of each day or more frequently during wet weather if sediment is tracked offsite. Clean sediment from roads by shoveling or pickup sweeping and transport to a controlled sediment disposal area.
- Only wash streets after sediment is removed. Street wash wastewater must be controlled by pumping back onsite or otherwise prevented from discharging into systems tributary to waters of the State.

Reference Appendix G for additional information on Revisions:

- Revision October 25, 2013: Letter to Ecology regarding slurry spill during grouting operation; new BMP is to always perform this grouting operation inside the casting basin.
- Revision November 1, 2013: Letter to Ecology regarding Basin Gate wash water that was leaked to the ground and to waters of the state. New BMP is for Kiewit-General's ECM to inspect the secondary containment system before Basin Gate washing may occur.

3.5. Erosion and Sediment Control Best Management Practices

Erosion and sediment control BMPs are discussed in the site's Erosion and Sediment Control Plan.

3.6. Chemical Treatment

3.6.1 Chitosan-enhanced Sand Filtration

Because the sediment ponds were in place and fully operational during the operations phase of the Project, a Chitosan-enhanced sand filtration (CESF) was not expected to be necessary to control turbidity. Nevertheless, Kiewit-General was prepared to implement such a system if the sediment controls and BMPs did not prove efficient enough to keep the discharge in compliance. To this end, a Request for Chemical Treatment Authorization was submitted to Ecology for CESF treatment (Attachment D). Plans and specifications for the contingency CESF system are provided as Attachment E to this SWPPP. Polyacrylamide (PAM) will not be used on the site. Per an email from Ecology's Scott Morrison to Kiewit-General dated September 9, 2011, the chemical treatment as described in the submitted Chemical Treatment Authorization was already covered by the site's Sand and Gravel Permit. A copy of this email is included in Attachment E of this plan.

3.6.2 Process Water pH Neutralization

High pH process water required neutralization prior to discharge. The detailed plan for treatment was provided to Ecology and is included with this SWPPP as Attachment D.

The treatment system for the site-wide system used sulfuric acid to neutralize the pH. Sulfuric acid treatment is quite common in industrial water quality applications to neutralize pH and with a 50 percent solution, is less hazardous, and allows finer control for adjusting pH.

Section 4.Sampling Plan

A separate Water Quality Monitoring Plan was prepared to address the water quality monitoring required for various activities associated with the operation of the site. Dewatering, chemical storm water treatment, and high pH process water will all require monitoring and reporting, which are defined in the NPDES Sand and Gravel General Permit. Section 6 of the HRM also includes guidelines, procedures, and requirements for water quality monitoring, sampling, data acquisition, and reporting that were followed as appropriate. Sampling locations are provided in the Water Quality Monitoring Plan (WQMP). Also, refer to the WQMP for Discharge Monitoring Reports due dates, and reporting procedures.

Section 5. References

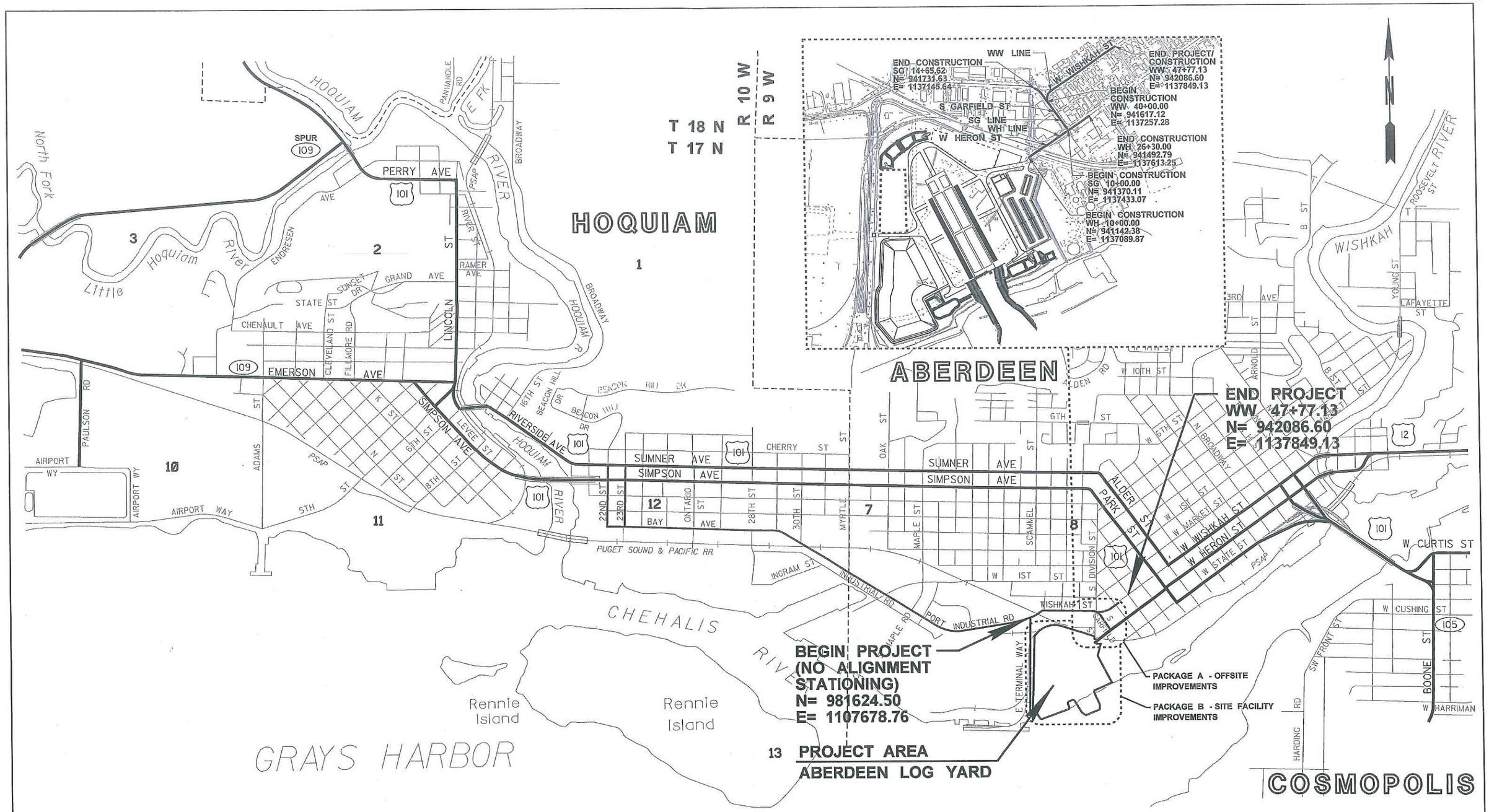
Kiewit-General, A Joint Venture (Kiewit-General). 2011. *SR 520 Pontoon Construction Design-Build Project Water Quality Monitoring and Protection Plan*. Prepared for Washington State Department of Transportation. 4 March.

Washington State Department of Ecology (Ecology). 2005. Stormwater Management Manual for Western Washington), Volume II, Construction Stormwater Pollution Prevention.

Washington State Department of Transportation (WSDOT). 2008. *Highway Runoff Manual.* M 31-16.01. Environmental and Engineering Programs Design Office. Olympia, Washington. June.

Attachment A

General Location Map



NOTES:

1. DARKENED ROADWAYS INDICATE HAUL ROUTES OR STATE ROADS

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DATE	23-AUG-2010				JOB NUMBER 007826		
PLOTTED BY	rmjohnson						
DESIGNED BY	J. RHODES				CONTRACT NO. 007826		LOCATION NO.
ENTERED BY	R. JOHNSON						
CHECKED BY	T. SCHNETZER						
PROJ. ENGR.	T. SCHNETZER						
REGIONAL ADM.	K. DAYTON	REVISION	DATE	BY			

Kiewit General HNTB kpff

PRELIMINARY NOT FOR CONSTRUCTION

Washington State Department of Transportation

SR 520
PONTOON CONSTRUCTION
DESIGN-BUILD PROJECT
ENVIRONMENTAL COMPLIANCE PLAN

SITE VICINITY MAP

FIGURE 1

SHEET OF SHEET

Attachment B

Site Maps

NOTES:

1, 2, 3. SEDIMENT TRAPS USED DURING CONSTRUCTION PHASE AND RECONSTRUCTED TO BE WET PONDS DURING THE SITE OPERATIONS PHASE.

4. CASTING BASIN.

5. STOCKPILE.

6. NEW SOUTHWEST DITCH OUTFALL.

7. EXISTING SOUTHEAST DITCH OUTFALL.

8. EXISTING NORTHWEST DITCH OUTFALL.

9. LAUNCH CHANNEL.

10. GATE AREA.

11. RIVERBANK BERM.

12, 13. NEW LAUNCH CHANNEL OUTFALLS.

14 CONCRETE BATCH PLANT AREA.(plant no longer on site)

15. GROUNDWATER DEWATERING UNDERDRAINS (GROUNDWATER CUT-OFF TRENCHES).

16. DEWATERING PRESETTLING POND.

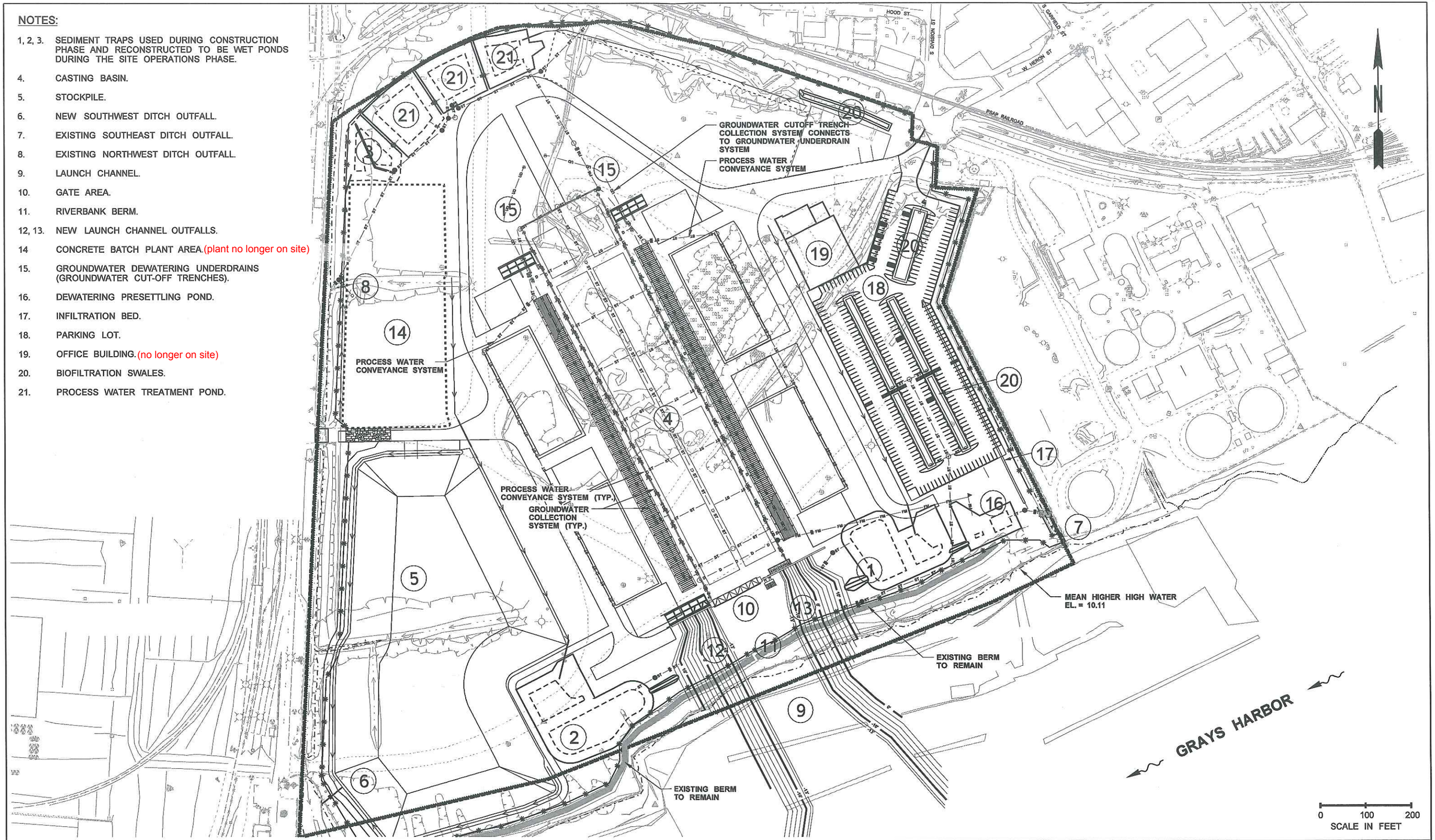
17. INFILTRATION BED.

18. PARKING LOT.

19. OFFICE BUILDING.(no longer on site)

20. BIOFILTRATION SWALES.

21. PROCESS WATER TREATMENT POND.



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DATE	16-FEB-2011						
PLOTTED BY	rmjohnson				JOB NUMBER 007826		
DESIGNED BY	J. RADUENZ						
ENTERED BY	R. JOHNSON						
CHECKED BY	J. RHODES				CONTRACT NO. 007826		LOCATION NO.
PROJ. ENGR.	T. SCHNETZER	MOTHBALL PHASE UPDATES	7/1/2015	NH			
REGIONAL ADM.	K. DAYTON	REVISION	DATE	BY			

Kiewit General
HNTB
kpff

PRELIMINARY
NOT FOR CONSTRUCTION

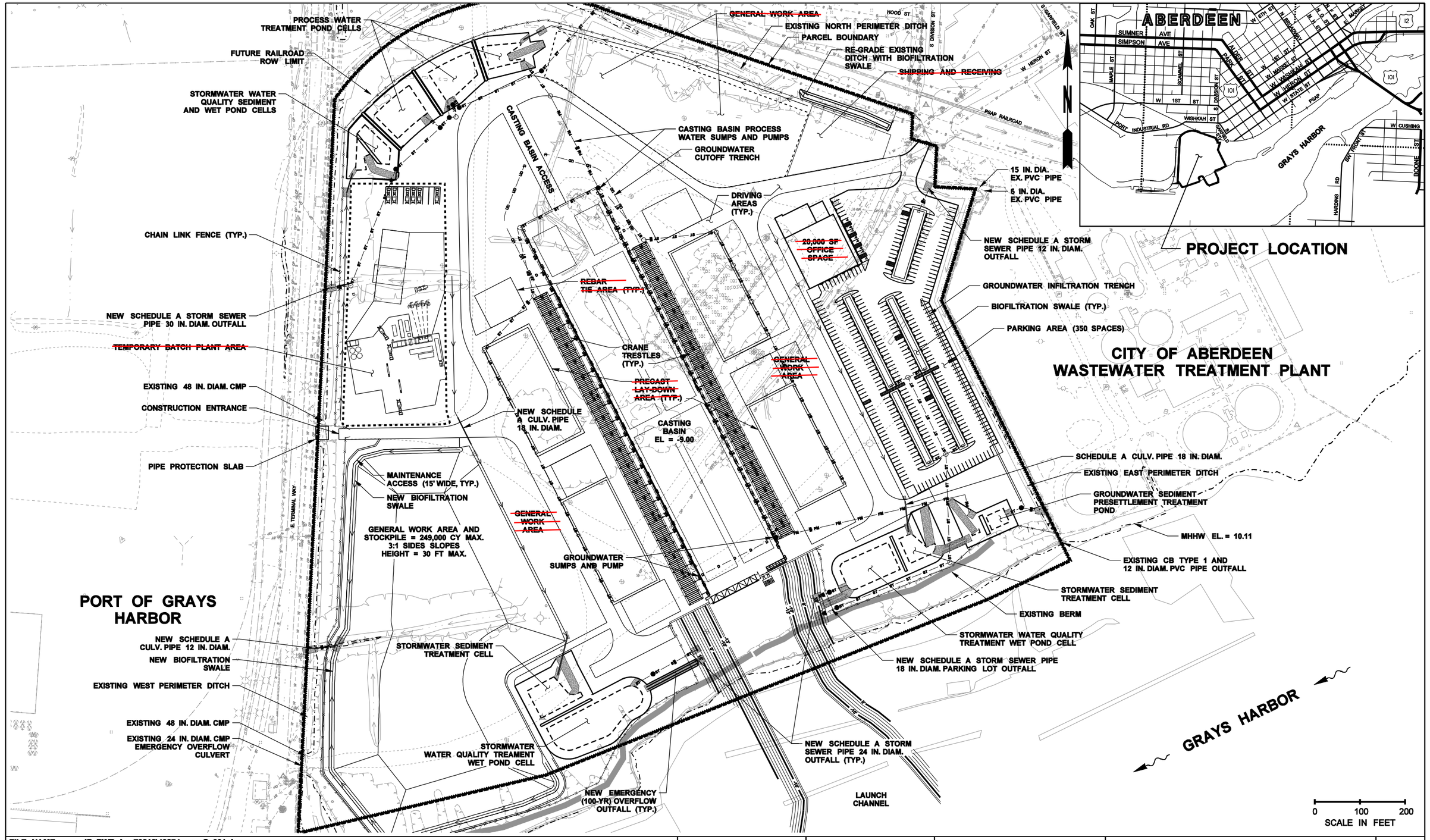
Washington State Department of Transportation

SR 520 PONTOON CONSTRUCTION DESIGN-BUILD PROJECT
STORMWATER POLLUTION AND PREVENTION PLAN

SITE LAYOUT: WATER MANAGEMENT PLAN

FIGURE 1

SHEET OF SHEET



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TIME	16-SEP-2010 13:34				10	WASH	
DATE	16-SEP-2010				JOB NUMBER		
PLOTTED BY	rmjohnson				007826		
DESIGNED BY	J. RADUENZ				CONTRACT NO.		LOCATION NO.
ENTERED BY	R. JOHNSON				007826		
CHECKED BY	J. RHODES						
PROJ. ENGR.	T. SCHNETZER	MOTHBALL PHASE UPDATE	7/1/2015	NH			
REGIONAL ADM.	K. DAYTON	REVISION	DATE	BY			

Kiewit General
HNTB
kpff

PRELIMINARY
NOT FOR CONSTRUCTION

Washington State Department of Transportation

SR 520 PONTOON CONSTRUCTION
DESIGN-BUILD PROJECT
ENVIRONMENTAL COMPLIANCE PLAN
APPENDIX C: SPCC PLAN

SITE LAYOUT

FIGURE 2

SHEET OF SHEET

PROCESS WATER PONDS

NORTH POND CONTROL STRUCTURES

WATER QUALITY WET POND

CONTINGENCY OUTFALL CONTROL STRUCTURE FOR PROCESS WATER TO SEWER SYSTEM (POINT OF COMPLIANCE FOR WASTE DISCHARGE PERMIT)

STATE WASTE DISCHARGE PERMIT IS REQUIRED PRIOR TO USE OF THIS CONTINGENCY OUTFALL

POC-3
BIOFILTRATION SWALE OUTFALL TO NORTH DITCH SURFACE WATER (POINT OF COMPLIANCE)

POC-2
WEST DITCH TREATED WATER OUTFALL TO SURFACE WATER (POINT OF COMPLIANCE)

REMOVED ~~BATCH PLANT SEDIMENT TRAP~~

(Not constructed) ~~BP-1~~
~~BATCH PLANT TREATED DISCHARGE TO THE WEST DITCH OUTFALL~~

~~Batch plant treated process water is discharged to control structure, then out to west stream ditch.~~

CAPPED/ DEACTIVATED

~~POC-6 BP-2~~
~~BATCH PLANT TREATED DISCHARGE TO GROUNDWATER (INFILTRATION POND)~~
(Not constructed)

POC-4
BIOFILTRATION SWALE OUTFALL TO EAST DITCH SURFACE WATER (POINT OF COMPLIANCE)

ABERDEEN

PROJECT LOCATION

CITY OF ABERDEEN
WASTEWATER TREATMENT PLANT

INFILTRATION TRENCH

POC-5
PRESETTLEMENT POND CONTROL STRUCTURE AND DISCHARGE TO INFILTRATION TRENCH (GROUNDWATER) (POINT OF COMPLIANCE)

AS OF APRIL 21, 2014, THIS OUTFALL IS NO LONGER REQUIRED TO BE MONITORED

~~Temp. POC-6~~
~~East Ditch discharge to Grays Harbor~~
~~(Point of Compliance)~~

PRESETTLEMENT POND CONSTRUCTED TO TREAT SEDIMENT FOR INFILTRATION TRENCH

PERMANENT WATER QUALITY TREATMENT WET POND

POC-6
EAST WATER QUALITY WET POND OUTFALL CONTROL STRUCTURE AND DISCHARGE TO GRAYS HARBOR (POINT OF COMPLIANCE)

POC-7
PARKING LOT BIOFILTRATION SWALES CONTROL STRUCTURE AND DISCHARGE TO GRAYS HARBOR (POINT OF COMPLIANCE)

POC-8
WEST WET POND OUTFALL CONTROL STRUCTURE AND DISCHARGE TO GRAYS HARBOR (POINT OF COMPLIANCE)

PERMANENT WATER QUALITY TREATMENT WET POND

POC-1
DISCHARGE LOCATION FOR STABILIZED STOCKPILE TO WEST DITCH SURFACE WATER (POINT OF COMPLIANCE)

GRAYS HARBOR

0 100 200
SCALE IN FEET

FILE NAME	IP_PWP:dms70363\49854_wqm_plan_e_001.dgn				REGION NO.	STATE	FED.AID PROJ.NO.
TIME	22-DEC-2010 07:47				10	WASH	
DATE	22-DEC-2010				JOB NUMBER		
PLOTTED BY	rmjohnson				007826		
DESIGNED BY	J. RADUENZ				CONTRACT NO.		LOCATION NO.
ENTERED BY	R. JOHNSON	MOTHBALL PHASE	7/1/2015	NH	007826		
CHECKED BY	J. RHODES	Delete Temp POC-6	4/21/2014	NH			
PROJ. ENGR.	T. SCHNETZER	Site conditions for Operations Phase	1/2/2014	NH			
REGIONAL ADM.	K. DAYTON	REVISION	DATE	BY			

Kiewit General
HNTB
kpff

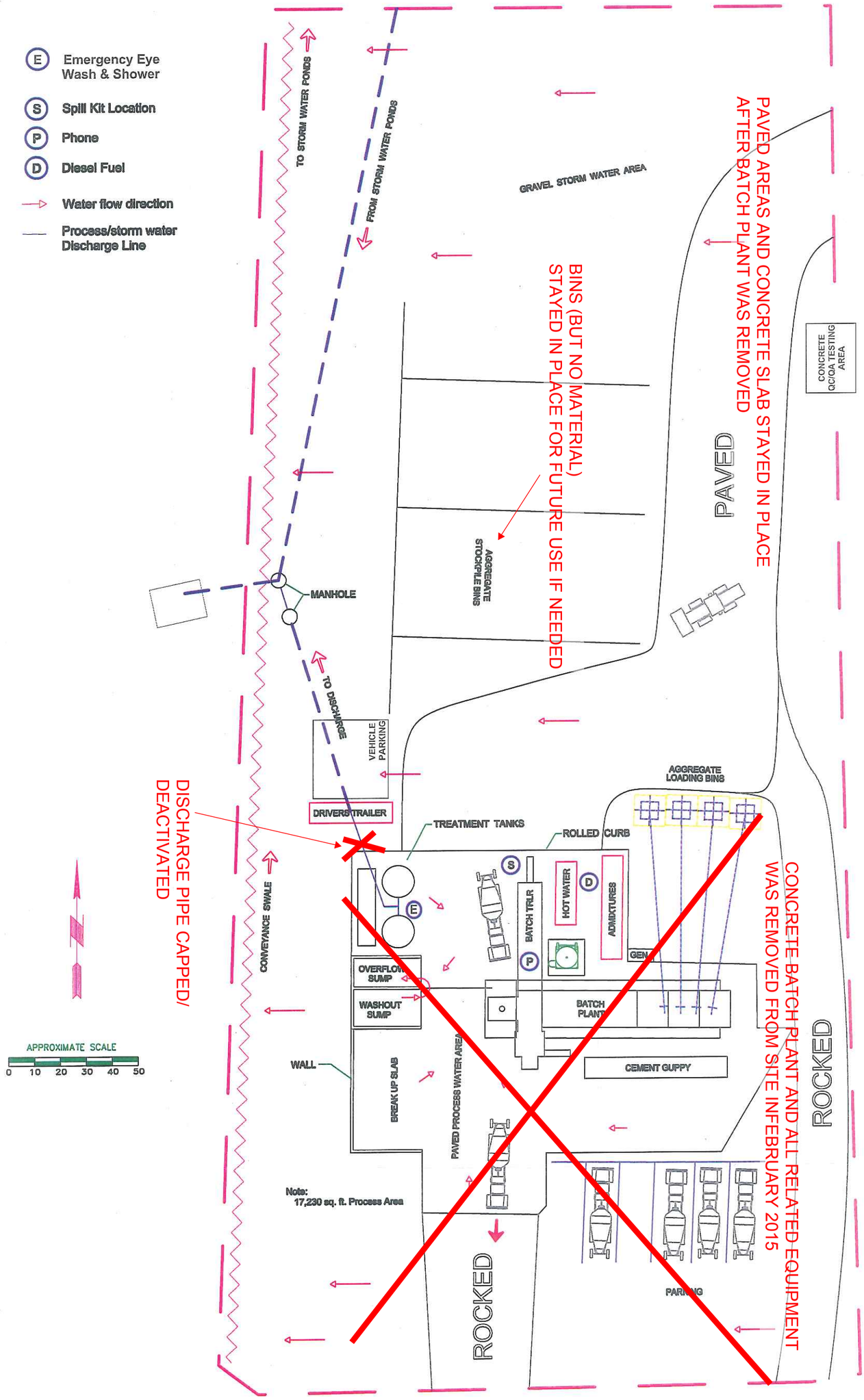
Washington State Department of Transportation

SR 520 PONTOON CONSTRUCTION
DESIGN-BUILD PROJECT
APPENDIX K SWPPP

SITE OPERATIONS MONITORING

FIGURE 1

SHEET OF SHEET



DRAWN: V. Ghigleri	Drawing # 520-0000-00	TITLE Readymix Site Plan Asbuilt	PLANT 520 Aberdeen Plant Adjacent to E. Terminal Rd. Aberdeen, WA 98520	CALPORTLAND
DESIGN:	DATE: 7/6/10			
SCALE: 1" = 40'	REV. 5/21/13			

Attachment C

Concrete Batch Plant Operations

NO LONGER APPLICABLE FOR
MOTHBALL PHASE
THIS ATTACHMENT HAS BEEN
DELETED FROM THE SWPPP

Attachment D

Request for Chemical Treatment Authorization

Kiewit-General, A Joint Venture
5620 112th St. East, Suite 126
Puyallup, WA 98373

June 26, 2011June 21, 2011

Scott E. Morrison, L.H.G.
Sand and Gravel Permit Manager
Washington State Department of Ecology, Southwest Region
P.O. Box 47775
Olympia WA 98504-7775

SUBJECT: CHEMICAL TREATMENT AT THE SR520 PONTOON CONSTRUCTION PROJECT, ABERDEEN
PERMIT NUMBER: WAG-50-1544

Dear Scott:

This letter provides the following materials as an update to the plans for chemical treatment of process water at the SR 520 Pontoon Construction Project site:

- Attachment 1 -- Points of Compliance for the Sand and Gravel Permit (for ease of reference, no changes);
- Attachment 2 – Proposal and Plans from NW Soil Cement LLC for the site-wide treatment system

As you know, under the Sand and Gravel Permit, there will be two systems that treat high pH concrete process water at this site. The first system that will be operational and treating water will be the system operated and managed by CalPortland to treat process water generated within the batch plant area. This system will use a standard hydrochloric acid treatment system to neutralize and test pH and TDS prior to discharge into an infiltration pond and, if necessary treat for TSS and turbidity prior to discharge to surface water. All treated process water that discharges to surface water from the batch plant will discharge at POC-2 as shown on Attachment 1. The CalPortland system is the same system described in the previously provided batch plant SWPPP as well as attached to the revised SWPPP provided hereto as Attachment 3. This batch plant system is the same type of system you have seen in operation for other CalPortland facilities operating under Sand and Gravel Permits.

The second treatment system will manage and treat process water generated site-wide as part of pontoon fabrication. This site-wide system will be located in the North Pond (Pond 1) and use sulfuric acid to neutralize the high pH process water. Sulfuric acid is widely used in industrial applications to neutralize pH, but not often associated with concrete production sites. The 36% solution proposed for this project is expected to provide rapid pH neutralization and a finer range of adjustment without the highly corrosive off gassing issues associated with hydrochloric acid. A stronger sulfuric acid solution may be implemented if quicker neutralization is needed. All treatment chemicals will be stored in accordance with the project's SPCC Plan.

The proposal from NW Soil Cement LLC (NWSC), provided as Attachment 2 describes the automated sulfuric acid treatment system that Kiewit-General is planning to implement. This system is expected

to treat process water at a rate of 1,200 gallons per minute. This rate, with all storage available, is expected to handle a rain event of 6.3 inches, well above the 10 year, 24 hour rain event of 3.2 inches in Aberdeen/ Hoquiam area (Note: The attached NWSC proposal uses a more conservative value of 5.0.).

Process water will first be pumped to a cell with an energy dissipater and floating silt curtain to reduce the turbidity. A control box will then pump the water from the first cell to one of two other cells for additional settling. Water flowing through the control box will be pH adjusted and monitored for turbidity. All treated process water that discharges to surface water will discharge at POC-2 as shown on Attachment 1. See the Northwest Soil proposal and plans in Attachment 2 for details on the system function. Other discharges at the project site, e.g., stormwater, de-watering water (groundwater) that is re-infiltrated, will be monitored pursuant to the appropriate NPDES Permit requirements.

NWSC will construct the site-wide process water treatment facility, ensure proper operation following start-up, and instruct at least two Kiewit-General employees in the basic operation of the system. NWSC will be contracted in an on-call basis to provide continued support and will be available to address any issues with the system that may arise.

Sampling at the site will also include a station at the North pond near the discharge from the pond to confirm the automated treatment system is functioning correctly. CalPortland will collect compliance data as well from the batch plant discharge and provide that data to the Kiewit-General Environmental Compliance Lead. However, the Discharge Monitoring Report will report only the data collected at the point where the discharge leaves the project site (POC-2).

In addition, at your request Kiewit-General will conduct a few rounds of TSS sampling at the time of the initial start-up. If this sampling indicates TSS is a problem for discharges at the site, measures to minimize TSS in the system will be implemented. These measures include, transferring the water to cell # 2 to allow additional settlement time or returning the water to cell # 4 for additional time within the system.

Kiewit-General currently is revising the SWPPP and the SPCC to reflect the use of the sulfuric acid system and address your concerns regarding storage and handling of the sulfuric acid. These documents will be provided next week.

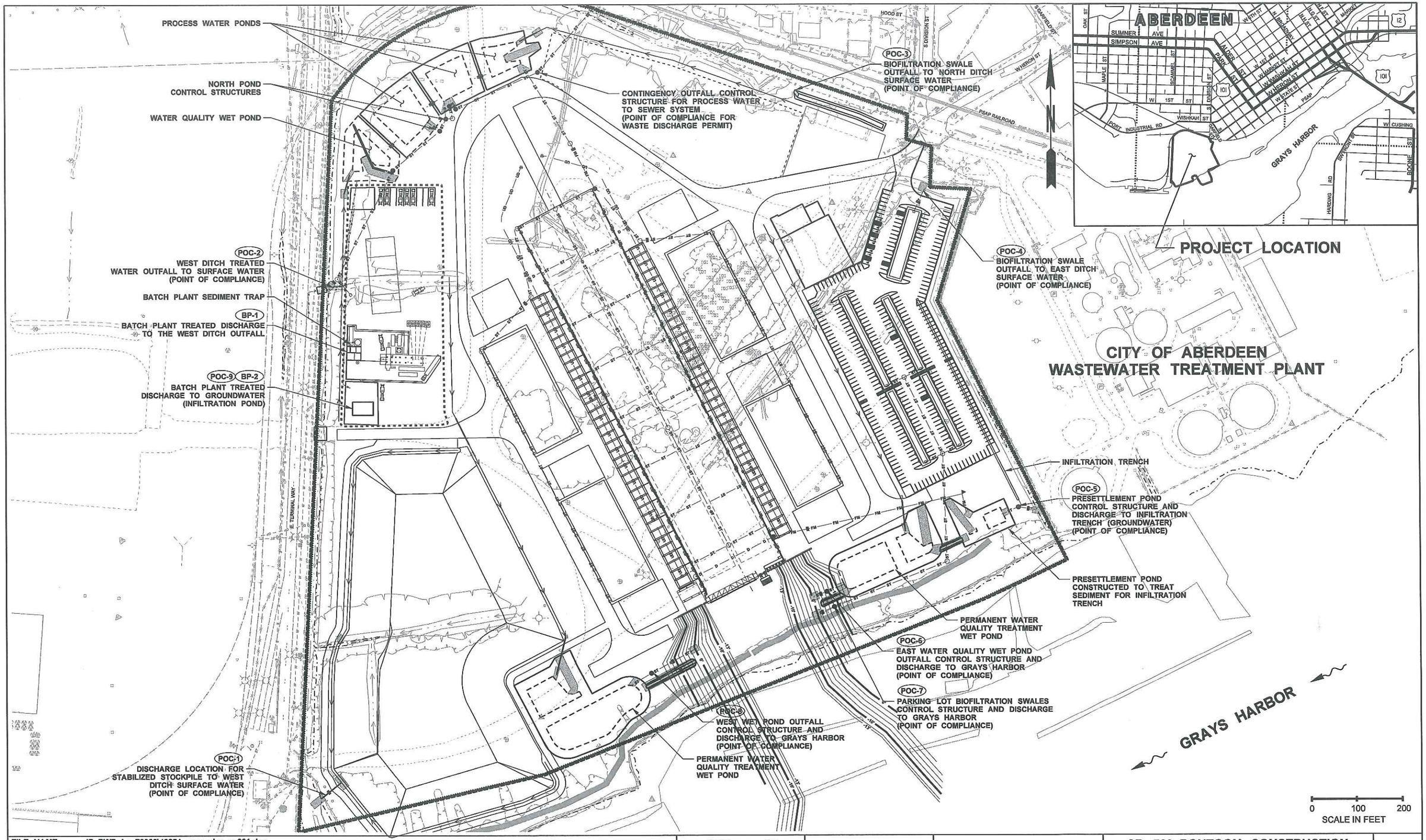
Kiewit-General plans to begin installation of the process water treatment system by July 1 . If you have any questions or concerns about the system, we would like to hear from you by as soon as possible. Please review the attached materials and let me know if you have questions or concerns

Sincerely yours,

Stuart Moore

Stuart Moore
Construction Manager

Encl.: 2 attachments



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TIME	22-DEC-2010 07:47				10	WASH	
DATE	22-DEC-2010				JOB NUMBER		
PLOTTED BY	rmjohnson				007826		
DESIGNED BY	J. RADUENZ				CONTRACT NO.		LOCATION NO.
ENTERED BY	R. JOHNSON				007826		
CHECKED BY	J. RHODES						
PROJ. ENGR.	T. SCHNETZER						
REGIONAL ADM.	K. DAYTON	REVISION	DATE	BY			

Kiewit General
HNTB
kpff

Washington State Department of Transportation

SR 520 PONTOON CONSTRUCTION
DESIGN-BUILD PROJECT
H.2 WATER QUALITY MONITORING PLAN
FOR NPDES SAND & GRAVEL PERMIT

SITE OPERATIONS MONITORING

FIGURE 1

SHEET OF SHEET

NORTHWEST SOIL CEMENT LLC

SOIL AMENDMENT - SPECIALITY CONSTRUCTION - WATER QUALITY

PO BOX 2319 REDMOND WA 98073 (425) 864-1645 ericnwsoilcement@yahoo.com

WATER QUALITY SERVICES
pH neutralization system specifications

5/18/2011

Project: Kiewit 520 Pontoon Facility ; Aberdeen, WA
Owner:
Contractor: Kiewit-General Attn: Kyle Johnson

PROJECT DURATION	3	**YEARS**
PROJECT BASIN SIZE	13.6	**ACRES**
TREATMENT CAPACITY	1200	**GAL/MIN**
RAIN FALL DURING DURATION (est.)	252	**INCHES**
TOTAL GALLONS TREATED	92,061,446	**GALLONS**

The intent of the system spec is to inject a 36% solution of Sulfuric Acid into a 1,200 GPM stream of process water prior to discharge for pH adjustment. Water is measured for pH coming into the treatment unit as well as leaving while a Hach turbidity probe reads and records NTU's as well. The SC 1000 controller data logs water quality and automatically operates the chemical pumps, adjusting the pH of the process water as it flows through the unit. When ever pH or turbidity parameters are not being met, the SC-1000 automatically re-directs water to a holding cell and triggers an alarm.

The following is a list of specificications for construction of the above described unit by Baker Corp. (see attached Baker Quote)

20' Conex box, heated with insulation for freeze protection and lighting
6" sch 80 PVC loop through box for mixing and probe separation
Exterior 6" flange connections
Hach SC 1000 controller w/ remote read and down load
Two pH probes saddle mounted on main line in and out of unit
One Hach Turb probe mounted on main line
Two chemical injection pumps controlled by the Hach SC-1000
6" in line static mixer
6" automatic valve opperated by the SC-1000
6" gate valve for flow control
6" electronic flow meter logged by the SC-1000 controller
Calibration tubes for injection
+/- 150 gal. poly chemical storage w/ secondary containment and remote loading line
Flow sensor to activate/shut off injection pumps

NORTHWEST SOIL CEMENT LLC

SOIL AMENDMENT - SPECIALITY CONSTRUCTION - WATER QUALITY

PO BOX 2319 REDMOND WA 98073 (425) 864-1645 ericnwsoilcement@yahoo.com

May 18, 2011

PROPOSAL TO: Kiewit General Attn: Kyle Johnson

PROJECT: SR 520 Bridge Pontoon Construction Facilities; Aberdeen, WA

SCOPE OF WORK: Process Water pH Management/ Treatment

pH Neutralization System Narrative:

The intent of the system is to neutralize pH and lower turbidity of collected water from the pontoon construction area, for about a three year period, to an acceptable level prior to discharge off site. We understand the site area is about 13.6 acres and there are two pond cells in the North system dedicated to this use. Both cell #3 and #4 are about 300,000 gallons each and there is a gravity discharge point from cell #2 and #3 that discharges to the West Ditch.

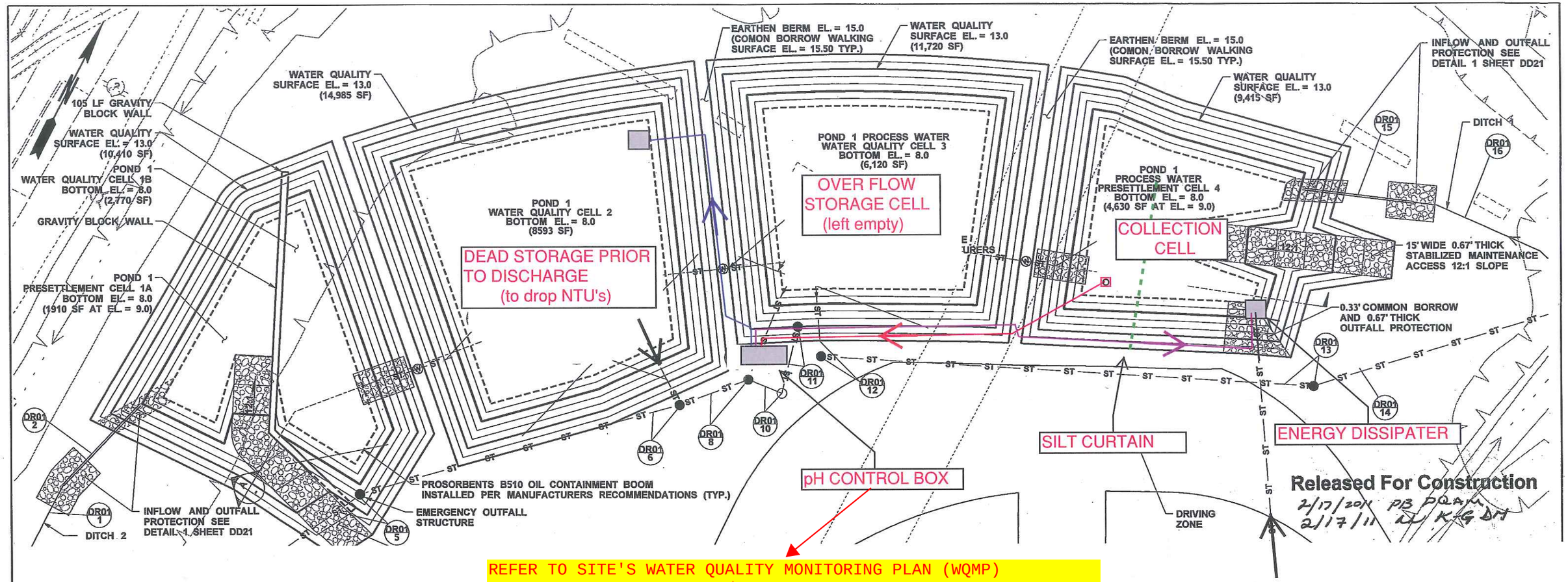
With a basin area of 13.6 acres, the 2 year, 24 hour rain event (3.5") would be about 1,287,300 gallons and the 10 year, 24 hour event (5") would be about 1,839,000 gallons. Utilizing cell #3 as reserve, total storage would be about 600,000 gallons. We have assumed a pH neutralization system flow rate of 1,200 gallons per minute, this would, with all storage available, allow the system to handle a 6.3" rain event prior to over topping (2,328,000gallons). With a 1,200 GPM system flow rate, once a rain event ends, complete storage would be realized after about 8.3 hours of operation.

Water collected in sumps around the work area would be conveyed to cell #4 and held for treatment. A floating pump in cell #4 would send water to the pH adjustment unit (see proposed specifications and Baker quote), where it would be measured and adjusted for pH as necessary with a 36% acid solution. An additional probe would read and log turbidity at the pH facility to determine water condition as well as system flow rate. Measurements for influent pH, effluent pH, NTU, and system flow rate would all be data logged in the control box prior to discharge to ~~pond~~ Cell #2. Dead storage in ~~Pond~~ Cell #2 will provide additional turbidity settlement prior to gravity discharge.

At system start up, in the event that the pH adjustment system fails or NTU's of the water coming through the pH system are too high, flows would be diverted back to Cell #4 in lieu of direct discharge via Cell #2. Cell #3 will be kept empty for reserve storage for times Cell #4 over tops.

Thank you for the opportunity to work with you on this project.

Regards,
Eric Heunisch
NSC Water Quality



REFER TO SITE'S WATER QUALITY MONITORING PLAN (WQMP)
FIGURE 1 FOR THE REVISED/CURRENT LAYOUT OF PH TREATMENT SYSTEM

NOTES:

Process water is pumped from the work area into Cell #4, using an energy dissipater as it enters the pond
A floating silt curtain in cell #4 helps drop sediment prior to the pH adjustment
Process water is pumped from cell #4 into the pH control box with a floating pump and 6" line
Water through the control box is pH adjusted and monitored for turbidity and flow rate with all three points data logged
The control box directs discharged water either to Cell #2 or #3 automatically, as water conditions change
Cell #2 is kept full and pH adjusted water is directed to the farthest point away from the gravity out fall to allow additional sediment to drop
At times of system start up, or out of compliance water, the water flow is diverted back to Cell #4 until discharge parameters are met
Cell #3 is left empty, so during a system failure or out of compliance discharge, water in Cell #4 will over flow into Cell #3 for storage

SCALE 1" = 40 ft

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TIME	15-FEB-2011 16:45				10	WASH	
DATE	15-FEB-2011				JOB NUMBER		
PLOTTED BY	rmjohnson				007826		
DESIGNED BY	J. RADUENZ						
ENTERED BY	R. JOHNSON						
CHECKED BY	R. KITTLER				CONTRACT NO.		LOCATION NO.
PROJ. ENGR.	T. SCHNETZER	REV 0 - RELEASE FOR CONSTRUCTION	02-18-11	RIK	007826		
REGIONAL ADM.	K. DAYTON	REVISION	DATE	BY			

Kiewit General HNTB kpff

RICHARD J. KITTLER 45071 REGISTERED PROFESSIONAL ENGINEER 2/15/11

Washington State Department of Transportation

SR 520
PONTOON CONSTRUCTION
DESIGN-BUILD PROJECT
PACKAGE B - SITE FACILITY IMPROVEMENTS

DRAINAGE DETAILS

Attachment E

Work Plan for Underwater Mortar Testing

NO LONGER APPLICABLE FOR MOTHBALL PHASE
THIS ATTACHMENT HAS BEEN DELETED FROM THE SWPPP

Attachment F

Approval Documents for Revisions

SR 520 PONTOON CONSTRUCTION

Kiewit-General, A Joint Venture
1301 West Heron Street
P.O. Box 1786
Aberdeen, WA 98520

January 14, 2014

Mr. Chris Johnson
Department of Ecology
Southwest Regional Office
P.O. Box 47775
Olympia, WA 98504-7775

RE: SR520 Pontoon Construction Design-Build Project
WAG-50-1544 NPDES Sand and Gravel General Permit
Slurry Spill reported on December 17, 2013

Dear Mr. Johnson,

On Tuesday, December 17, 2013, at around 10:45 AM, I discovered spilled concrete slurry and process water on the ground, just south of the concrete batch plant. This is where Kiewit-General typically stages the concrete washout pans (Eco-Pans) to allow the wet concrete or slurry to harden before disposing of it in the batch plant's concrete recycling pit. There were several Eco-Pans staged there at the time. Upon discovery, the slurry was immediately removed from the ground, and disposed of in the batch plant's concrete slurry containment pit for recycling. I called your office that same morning to report this spill, at which time I left you a detailed voice mail message. This follow-up letter is provided as required by permit condition S.6.E.3.

Upon further investigation, we determined that the slurry spill probably occurred during the swing shift, as one of the forklift operators was moving the Eco-Pans. The forklift operator indicated that he was not aware there had been a spill, because it was too dark to see. While insufficient lighting during night-time operations may have been a contributing factor, the primary cause of the spill was that the Eco-Pan was did not have a lid on it when it was moved.

On 12/19/2013, I discussed this incident with the project's foremen during their weekly safety meeting, plus presented our Environmental Toolbox Topic regarding best management practices for using the Eco-Pans. The foremen subsequently shared this information with their crews.

Kiewit-General's management has reviewed the Eco-Pans staging area and general procedures for containment of concrete slurry, and has met with Cal-Portland's Batch Plant managers about this. Based on this meeting, Kiewit-General will stage the Eco-Pans over the batch plant's concrete pad, which is graded to drain to their slurry containment pit. The forklift operators were also directed to ensure lids are placed on Eco-Pans anytime they are moved outside of the

concrete pad. This new procedure will ensure that any spills that may occur while staging these Eco-Pans over the concrete pad will be fully contained, and will not reach the bare ground. Additionally, this location will have better lighting as already provided by the batch plant.

Let me know if you have any questions about this.

Regards,

KIEWIT-GENERAL, A JOINT VENTURE

Norma Hernandez, CESCL
Environmental Compliance Manager

Cody Bishop – Kiewit-General
Dave Davies - WSDOT

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SLURRY LETTER

Sent To: ECOLOGY / SOUTHWEST REGION

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City, State, ZIP+4: OLYMPIA, WA 98504-7775

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SR 520 PONTOON CONSTRUCTION

Kiewit-General, A Joint Venture
1301 West Heron Street
P.O. Box 1786
Aberdeen, WA 98520

November 1, 2013

Mr. Chris Johnson
Department of Ecology
Southwest Regional Office
P.O. Box 47775
Olympia, WA 98504-7775

RE: SR520 Pontoon Construction Design-Build Project
WAG-50-1544 NPDES Sand and Gravel General Permit
Truss Gate Wash Water Discharge

Dear Mr. Johnson,

On October 5th 2013, Kiewit-General notified Ecology by phone of a process water discharge that occurred on that same day. Below are the details and subsequent actions for this incident.

The activities that triggered the notification and why they occurred

During each pontoon float-out event, the steel casting basin gate is removed to allow the pontoons to be tugged out into the harbor. The casting basin gate is composed of three truss sections, which were removed as individual sections after the casting basin was flooded for our third scheduled pontoon float-out. The gate truss sections were removed at approximately 7:15 AM on October 5th, and placed west of the casting basin on wooden timber supports, with plastic sheeting containment underneath. In order to adequately inspect the gate trusses, Kiewit-General power washes the surfaces to remove marine build-up. No detergents are ever used during any part or the power washing operation. The wash water is contained in the secondary containment provided by Kiewit-General, and then pumped to a process water detention pond on site (Pond 2). During our power washing operation on October 5th, it was observed that some of the wash water had leaked from the eastern edge of the containment area, which is adjacent to the casting basin. At the time, the casting basin was open to the harbor, so it contained harbor water. The leaked wash water had spilled over the edge and down into the casting basin harbor water. It is estimated that less than 2 gallons of wash water was discharged. The reason the leak occurred was that the plastic sheeting had not been fully extended (about 4 feet) as necessary to capture the full length of the truss being washed.

Location of the work

The truss gate power washing operation was set up adjacent the southwest corner of the casting basin.

Potential Solutions to the problem or if additional investigation is needed, and the agreed upon course of action

During the two previous float-out cycles, the secondary containment sheeting has been sufficient to contain the process water. However, during this last power washing operation, the sheeting was not installed adequately by the crew. For future float-out cycles, Kiewit-General will establish a "Hold Point", so that the secondary containment will be fully inspected by Kiewit-General's Environmental Compliance Manager prior to commencing the power washing.

Regards,

KIEWIT-GENERAL, A JOINT VENTURE

Norma Hernandez, CESCL
Environmental Compliance Manager

Cody Bishop – Kiewit-General
Dave Davies - WSDOT

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Total Postage & Fees	$ $3.56

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ABERDEEN WA 98520 USPS Postmark Here NOV 1 2013

7012 3460 0001 9880 6869

letter for GATE WASH

Sent To: ECOLOGY SW REGIONAL OFFICE
Street, Apt. No., or PO Box No.: P.O. BOX 47775
City, State, ZIP+4: OLYMPIA, WA 98504-7775

PS Form 3800, August 2006 — See Reverse for Instructions

SR 520 PONTOON CONSTRUCTION

Kiewit-General, A Joint Venture
1301 West Heron Street
P.O. Box 1786
Aberdeen, WA 98520

October 25, 2013

Mr. Chris Johnson
Department of Ecology
Southwest Regional Office
P.O. Box 47775
Olympia, WA 98504-7775

RE: SR520 Pontoon Construction Design-Build Project
WAG-50-1544 NPDES Sand and Gravel General Permit
Slurry Spill on September 25, 2013

Dear Mr. Johnson,

On ~~August 26~~ SEPTEMBER, 2013, Kiewit-General notified Ecology by phone of a slurry and process water spill that occurred on September 25, 2013. Below are the details and subsequent actions for this incident.

The activities that triggered the notification and why they occurred

Kiewit-General had set up a grouting operation on the west side of the casting basin. The grouting equipment had been staged within a secondary containment area. However, the secondary containment had leaked, and a small amount of process water was discharge to the rocks on the basin side-slopes below the work area. Additionally, during the demobilization of the equipment, some slurry spilled on the ground, outside of the secondary containment area.

Location of the work

The grouting equipment and secondary containment was located on the crane rail area just west of the casting basin.

Potential Solutions to the problem or if additional investigation is needed, and the agreed upon course of action

The secondary containment that had been provided was not sufficiently protected from potential punctures that may have occurred during the placement and use of the grouting equipment. For future grouting operations, Kiewit-General will provide staging within the casting basin area, such that any process water will be fully contained and collected within the

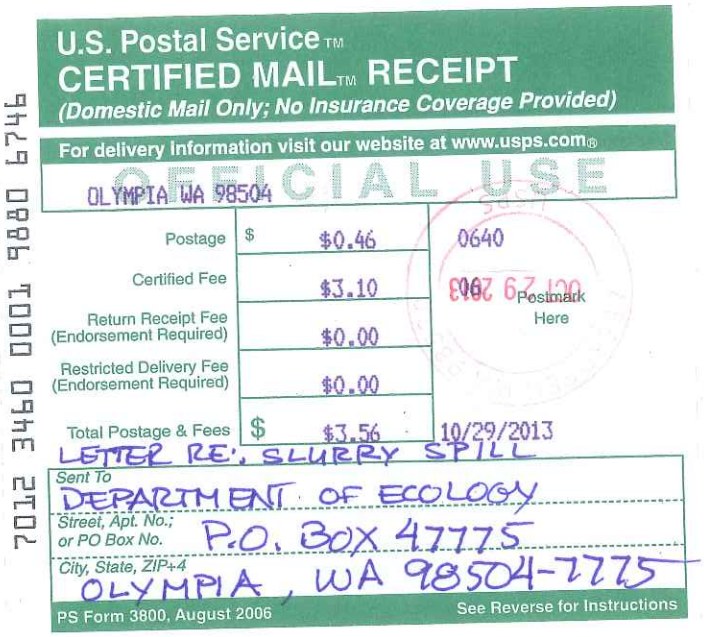
casting basin, and conveyed to the process water detention pond for treatment prior to final discharge.

Regards,

KIEWIT-GENERAL, A JOINT VENTURE

Norma Hernandez, CESCL
Environmental Compliance Manager

Cody Bishop – Kiewit-General
Dave Davies - WSDOT



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LETTER RE: SLURRY SPILL

Sent To: DEPARTMENT OF ECOLOGY
Street, Apt. No.; or PO Box No.: P.O. BOX 47775
City, State, ZIP+4: OLYMPIA, WA 98504-7775

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SR 520 PONTOON CONSTRUCTION

Kiewit-General, A Joint Venture
1301 West Heron Street
P.O. Box 1786
Aberdeen, WA 98520

July 19, 2013

Mr. Chris Johnson
Department of Ecology
Southwest Regional Office
P.O. Box 47775
Olympia, WA 98504-7775

RE: SR520 Pontoon Construction Design-Build Project
WAG-50-1544 NPDES Sand and Gravel General Permit
Notice to Eliminate Discharge Monitoring Report for POC-9

Dear Chris,

As per our phone conversation on Wednesday July 17, 2013, Kiewit-General is providing this letter as notification to Ecology that we did not construct POC-9, and that we do not intend to discharge from POC-9 in the future. In previous quarterly reports, we have submitted the discharge report form for POC-9, indicating there was "no discharge". However, beginning with 3rd Quarter 2013, we will not include the POC-9 form in our quarterly reporting.

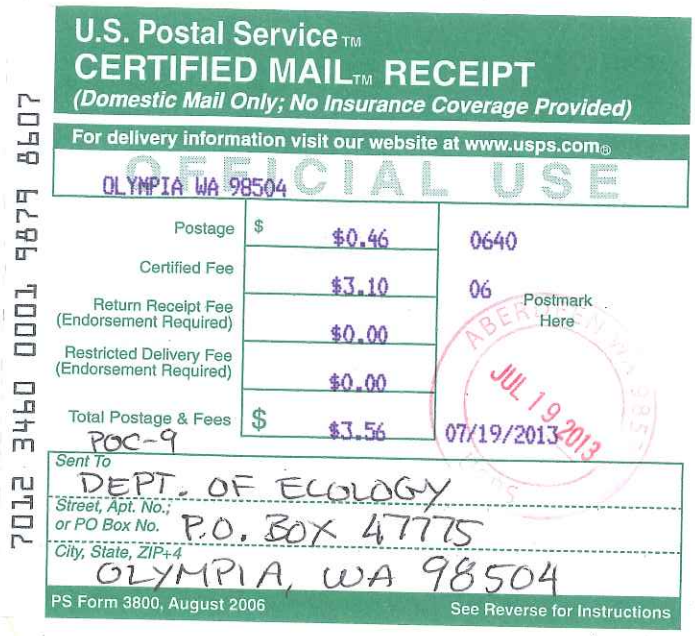
Let me know if you have any questions about this.

Regards,

KIEWIT-GENERAL, A JOINT VENTURE

Norma Hernandez, CESCL
Environmental Compliance Manager

Cody Bishop – Kiewit-General
Dave Davies - WSDOT



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POC-9

7012 3460 0001 9879 8607

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Street, Apt. No.; or PO Box No.: P.O. BOX 47775
City, State, ZIP+4: OLYMPIA, WA 98504

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SR 520 PONTOON CONSTRUCTION

Kiewit-General, A Joint Venture
1301 West Heron Street
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July 19, 2013

Mr. Chris Johnson
Department of Ecology
Southwest Regional Office
P.O. Box 47775
Olympia, WA 98504-7775

RE: SR520 Pontoon Construction Design-Build Project
WAG-50-1544 NPDES Sand and Gravel General Permit
TSS Monitoring at POC-6 and POC-8

Dear Chris,

As per our phone conversation on Wednesday July 17, 2013, Kiewit-General has discovered two errors in our implementation of the site's water quality monitoring as required by our Sand and Gravel General Permit. These errors are as follows:

Monitoring at POC-8:

Kiewit-General had originally interpreted that the water discharged from Pond 2 through POC-8 was Type 3 Stormwater, as defined in the Sand and Gravel Permit, and that therefore the TSS monitoring requirement did not apply (see Table 3 of the permit condition S2). However, based on our phone conversation, the water from this pond should be considered process water, and the TSS monitoring should be done at POC-8. I will begin doing so from now on.

Monitoring at POC-6 versus Temp-POC6:

Per emails between Brock Andrews (Kiewit-General) and Scott Morrison (Ecology) on January 27, 2012, it was agreed that Kiewit-General would monitor TSS at the "Temp POC-6" location instead of POC-6 for water from Pond 3, because the water was being treated with the Chitosan filtration system and then discharged at the "Temp POC-6". However, after the filtration system had been removed from site in December 2012, I did not switch back to sampling for TSS at the original POC-6. I will resume TSS monitoring at POC-6 starting this quarter (3rd quarter of 2013).

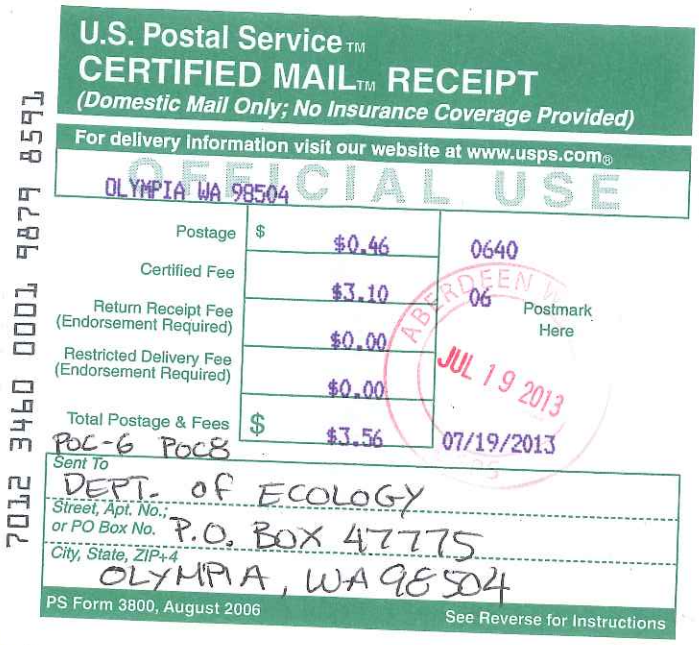
Let me know if you have any questions about this.

Regards,

KIEWIT-GENERAL, A JOINT VENTURE

Norma Hernandez, CESCL
Environmental Compliance Manager

CC:
Cody Bishop – Kiewit-General
Dave Davies - WSDOT



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Total Postage & Fees	$ $3.56	07/19/2013

POC-6 POC8

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Street, Apt. No.; or PO Box No.: P.O. BOX 47775
City, State, ZIP+4: OLYMPIA, WA 98504

PS Form 3800, August 2006 — See Reverse for Instructions

7012 3460 0001 9879 8597

Norma.Hernandez

From: Norma.Hernandez
Sent: Tuesday, July 09, 2013 3:30 PM
To: 'Sebe461@ECY.wa.gov'
Cc: Cody.Bishop; Justin.Ludwig; DavieDa@wsdot.wa.gov; kscott@aberdeenwa.gov; bchristy@aberdeenwa.gov; Doug.Rosenthal
Subject: Treatment of algae in Casting Basin water and eventual discharge to WWTP (Permit ST 6223)
Attachments: MSDS=Refresh Dry Chlorinating Granules.pdf

To: Steven Eberl, P.E., Water Quality Program, Washington Department of Ecology
Re: State Waste Discharge Permit ST 6223 and proposed treatment of algae in water

Good afternoon, Steve:

Per our conversation today, I wanted to send you this email to confirm our discussion of how we may treat algae growth occurring in shallow standing water (+/- one to two inches) at the bottom of our casting basin. This includes water seeping from the harbor. Due to the slippery condition this algae presents, we want to reduce or eliminate algae growth by adding Calcium Hypochlorite to the standing water. As I explained, this is the same product we used last year for retention Pond 2, but we treated the water ourselves with specialized equipment and subcontractor (no longer on site) prior to discharging; that procedure was approved by Douglas Howie/ECY under our stormwater permit. The Calcium Hypochlorite (MSDS attached) is in granular form, and it will be dispensed directly onto the standing water, where it will be mixed and dissolved for even distribution. We will track the dates and amounts dispensed, and monitor its effect to the algae. The water from the casting basin floor drains into a sump pit, where it is pumped up to our retention Pond 1 Cell 4, from which we are able to discharge to the City of Aberdeen WWTP. The WWTP will be able to treat residual chlorides prior to discharging the water to the environment. We will contact the City of Aberdeen WWTP to schedule discharges to their facility, and advise them on the approximate volume of water, as well as corresponding amount of Calcium Hypochlorite used. All other required testing and monitoring will be performed as described in our State waste Discharge Permit ST 6223.

Also per our discussion, while Permit General Condition G5 requires a supplement or revision to the permit application whenever “a new or increased discharge or change in the nature of discharge is anticipated” , you clarified that this does not apply to our proposed algae control procedure as described above.

I talked with Kyle Scott today about this (WWTP), and will talk to Bill Christy (WWTP) tomorrow to confirm these procedures with him.
Let me know if you have any questions.

Thank you.

Kiewit-General, A Joint Venture
SR520 Pontoons Project
1301 West Heron St.
Aberdeen, WA 98520

Norma Hernandez, CESCL
Environmental Compliance Manager
Office: (360) 500-4389 / Cell: (602) 516-3817
Norma.Hernandez@kiewit.com

Norma.Hernandez

From: Norma.Hernandez
Sent: Wednesday, June 19, 2013 11:52 AM
To: DavieDa@wsdot.wa.gov
Cc: ZiegleD@wsdot.wa.gov; Cody.Bishop; Will.Morgan
Subject: Question Regarding Pressure Relief Valve and management of groundwater

Dave,

Yesterday, Will Morgan and I spoke with Chris Johnson (Ecology / Sand & Gravel Permit Manager) regarding our management of the groundwater currently being discharged by the pressure relief valve (PRV). We explained that the PRV is designed to relieve groundwater pressure beneath the casting basin slab, and that we currently have a PRV which has popped and is discharging groundwater. We told him that K-G is transferring this groundwater into the casting basin's process water drainage system, which then pumps the water to Pond 1 for treatment. He agreed that, provided we are monitoring the process water for TSS as required by permit conditions, it was acceptable to mix this groundwater with the process water. He understands that K-G interprets this groundwater to be mining dewatering water as defined by the permit on page 47, and had no objections to this interpretation. However, he encouraged that K-G speak with John Pearch (Ecology / Well Construction Coordinator) to confirm any compliance requirements with regulations regarding water wells.

Today, I spoke with John Pearch, and explained the above situation. I further explained that the PRVs are steel sleeve inserts 4" in diameter which penetrate the casting basin slab thickness, but do not go further down. John agreed that water well regulations do not apply to these PRVs. He said he would call Chris Johnson to inform him of our conversation.

Let me know if you have any questions about this.
Thank you.

Kiewit-General, A Joint Venture
SR520 Pontoons Project
1301 West Heron St.
Aberdeen, WA 98520

Norma Hernandez, CESCL
Environmental Compliance Manager
Office: (360) 500-4389 / Cell: (602) 516-3817
Norma.Hernandez@kiewit.com

Brock.Andrews

From: Morrison, Scott (ECY) <smor461@ECY.WA.GOV>
Sent: Friday, September 09, 2011 11:29 AM
To: Brock.Andrews
Subject: RE: Chemical Authorization Package SR 520 Pontoons

Brock –

The chemical authorization is tied to the industrial stormwater permit. Your ability to treat is covered under the Sand and Gravel Permit. The question of the Permit by rule would come into play if you were treating hazardous waste. There is nothing that precludes you from conducting treatability tests. Monitoring of discharges, if they occur, is required.

Scott E. Morrison, L.H.G.
Sand and Gravel Permit Manager
Department of Ecology
Southwest Region

From: Brock.Andrews [mailto:Brock.Andrews@kiewit.com]
Sent: Thursday, September 08, 2011 3:34 PM
To: Morrison, Scott (ECY)
Cc: Michael.Shaw - KBM; Davies, David (520 PCP); Tony.Hartley
Subject: RE: Chemical Authorization Package SR 520 Pontoons

Hello Scott,

For your awareness, K-G has already placed the pH neutralization conex on-site and has begin installing 8" PVC piping around pond 1 to carry the process water into cells #2-4. Currently, no process water has been generated from the basin, and the system is not live.

However, within the next 2 weeks K-G needs to begin trial treatability tests to calibrate our system, and at the latest, by 9/23/2011 K-G needs to have this system on-line and ready to use.

We are still awaiting a response from Department of Ecology on the pH chemical authorization package submitted to you on 7/22/2011.

Can you please update me of the current status and estimated timeline for completion of this review. As Mike Shaw mentioned in his email below, anything you can do to expedite this process would be greatly appreciated.

Thank you,

Kiewit-General, A Joint Venture
SR520 Pontoons Project
1606 E. Terminal Drive
Aberdeen, WA

Brock Andrews
Environmental Engineer
Cell: (425) 419-3979
Brock.Andrews@Kiewit.com

From: Michael.Shaw - KBM
Sent: Tuesday, August 23, 2011 12:34 PM
To: Morrison, Scott (ECY); Howie, Douglas (ECY)
Cc: Tony.Hartley; Brock.Andrews
Subject: RE: Chemical Authorization Package SR 520 Pontoons
Importance: High

Scott: I know you realize how important the authorization is to our operation, but anything you can do to help the department expedite our request is greatly appreciated. If there is more you need from our side please don't hesitate to ask. Thank you in advance for your assistance.

From: Morrison, Scott (ECY) [mailto:smor461@ECY.WA.GOV]
Sent: Tuesday, August 23, 2011 10:39 AM
To: Brock.Andrews; Howie, Douglas (ECY)
Cc: Michael.Shaw - KBM; Tony.Hartley
Subject: RE: Chemical Authorization Package SR 520 Pontoons

This activity should be shifted into the coverage under the Sand and Gravel General Permit. The Hazardous Materials aspect of the H2SO4 is being reviewed by our office.

Scott E. Morrison, L.H.G.
Sand and Gravel Permit Manager
Department of Ecology
Southwest Region

From: Brock.Andrews [mailto:Brock.Andrews@kiewit.com]
Sent: Monday, August 22, 2011 3:28 PM
To: Howie, Douglas (ECY)
Cc: Morrison, Scott (ECY); Michael.Shaw - KBM; Tony.Hartley; Brock.Andrews
Subject: Chemical Authorization Package SR 520 Pontoons

Hello Doug,

I am just following up with you on the Chemical Authorization package that K-G submitted to Scott Morrison on 7/22/2011, and to you on 8/12/2011. The pH neutralization conex was delivered to the project today, and K-G would like to begin setting up the system within the next two weeks.

However, K-G will not implement the system until we receive correspondence from Department of Ecology that the chemical authorization submittal package has been reviewed and is complete and accurate. At that point, the chemical authorization package will be incorporated into the second revision of the project's ECP.

If you can advise me on the review status of the chemical authorization package, I would appreciate it.

Thanks Doug,

Kiewit-General, A Joint Venture
SR520 Pontoons Project
1606 E. Terminal Drive
Aberdeen, WA

Brock.Andrews

From: Brock.Andrews
Sent: Friday, August 12, 2011 9:49 AM
To: douglas.howie@ecy.wa.gov
Cc: Davies, David (520 PCP); Michael.Shaw - KBM; Brock.Andrews; Tony.Hartley
Subject: FW: Revised SR 520 Pontoons ESCP, SWPPP, & SPCC Plans
Attachments: 1 520 ECP AppxB.2 v02-2011 071511.pdf; 1 520 ECP AppxK v02-2011 071511.pdf; 520 ECP AppxC T1-4 v02-2011 071511.pdf; 520 ECP AppxC T5-9 v02-2011 071511.pdf; 520 ECP AppxC v01-2011 071511.pdf; Chem Treat Submittal 062911 signed.pdf

Hi Doug,
As we discussed on the phone, here it is.
Thanks again,

Kiewit-General, A Joint Venture
SR520 Pontoons Project
1606 E. Terminal Drive
Aberdeen, WA

Brock Andrews
Environmental Engineer
Cell: (425) 419-3979
Brock.Andrews@Kiewit.com

From: Brock.Andrews
Sent: Friday, July 22, 2011 10:02 AM
To: 'smor461@ecy.wa.gov'
Cc: Michael.Shaw - KBM; Kate Snider; Tony.Hartley; Brock.Andrews
Subject: Revised SR 520 Pontoons ESCP, SWPPP, & SPCC Plans

Hello Scott,

Attached are the revised SR 520 Pontoons project SWPPP, SPCC, and ESCP plans for your review. These plans now include more detailed discussions on the sulfuric acid pH neutralization system K-G will be using to treat process water from the casting basin.

Upon your review, these plans will be included in revision 2 of the project ECP.

Please let me know if you have any questions or concerns.

Thanks again,

Kiewit-General, A Joint Venture
SR520 Pontoons Project
1606 E. Terminal Drive
Aberdeen, WA

Brock Andrews

Environmental Engineer
Cell: (425) 419-3979
Brock.Andrews@Kiewit.com

Attachment G

Tool Box Topic

NO LONGER APPLICABLE FOR MOTHBALL PHASE
THIS ATTACHMENT HAS BEEN DELETED FROM THE SWPPP